What is claimed is:

1. A method for compressing CT scan digital projection data, which compression allows for the later reconstruction of medically useful images from said compressed data, said method comprising the steps of assembling the CT scan digital projection data in a format suited for compression, and compressing the CT scan digital projection data with compression software into a compressed data set.

2. The method of claim 1 wherein the compression software provides lossless data compression.

3. The method of claim 1 further comprising the step of controlling the compression by specifying the maximum allowable error between a reconstructed pixel value and an original pixel value to be within two standard deviations of the random noise variance.

4. The method of claim 3 wherein the step of controlling the compression by specifying the maximum allowable error between a reconstructed pixel value and an original pixel value includes controlling the allowable error to be within two counts.

5. The method of claim 3 wherein the step of compressing the data includes the step of compressing the data on the order of about 15:1.

6. The method of claim 3 wherein the step of compressing the data includes the step of compressing the data on the order of about 12:1.

7. The method of claim 3 wherein the step of compressing the data includes the step of compressing the data on the order of less than about 23:1.

8. The method of claim 3 wherein the step of compressing the data includes the step of compressing the data on the order of between about 12:1 to about 15:1.

9. The method of claim 1 further comprising the step of storing said compressed data along with an identifying index for any previously taken views from said data.

10. The method of claim 1 wherein said CT scan digital projection data comprises raw data taken from at least one scan of a patient's anatomy of interest so that views may be taken from said raw data other than those previously taken.

11. The method of claim 1 further comprising the step of stripping the raw data out of any proprietary format prior to compression thereof.

12. The method of claim 1 further comprising the step of electronically transmitting the compressed data set to a computer for storage and/or retrieval.

13. The method of claim 12 further comprising the step of reconstructing an image from the compressed data set.

14. The method of claim 13 wherein the step of reconstructing an image includes the step of decompressing the compressed data set.

15. The method of claim 1 further comprising the step of determining a compression ratio based at least in part on the portion of the patient's anatomy represented in the uncompressed data.

16. The method of claim 1 further comprising the step of determining a compression ratio based on the product of the tube mAs and scanner collimation that was used in the CT scan for generating the CT data.

17. A method for compressing raw CT scan digital projection data, which compression allows for the later reconstruction not only of the projection data but also other medically useful images from said reconstructed projection data, said method comprising the steps of assembling the raw CT scan digital projection data in a format suited for compression, compressing the raw CT scan digital projection data with compression software into a compressed data set, decompressing the raw CT scan digital projection data, and constructing medically useful images therefrom, said images being different from those images constructed at the time of data collection.

18. The method of claim 17 further comprising the step of preserving an identifying index for images previously taken, said identifying index being sufficient to define an image taken from said raw CT scan digital projection data.

19. The method of claim 17 wherein the step of compressing the data includes the step of compressing the data on the order of between about 12:1 to about 15:1.

20. The method of claim 17 further comprising the step of determining a compression ratio based at least in part on the portion of the patient's anatomy represented in the uncompressed data.

21. The method of claim 17 wherein said compression software is JPEG-LS software.

22. A programmable digital processing device configured to compress raw CT scan digital projection data, which compression allows for the later reconstruction not only of the projection data but also medically useful images from said reconstructed projection data, said device including an executable software program for achieving said compression.

23. The programmable digital processing device of claim 22 wherein said software program comprises JPEG-LS software.

24. The programmable digital processing device of claim 22 further configured to compress said raw CT scan digital projection data on the order of between about 12:1 to about 15:1.

25. The programmable digital processing device of claim 22 further configured to determine a compression ratio based at least in part on the portion of the patient's anatomy represented in the uncompressed data.